

Shakan Pitfall Traps: Hunting technique in the Zulu kingdom

by

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SYNOPSIS

The results of excavations of pitfall traps are described. These were located in the Umfolozi Game Reserve, Zululand, and had been used by the Zulu King, Shaka, in the early nineteenth century. By integrating these archaeological data with ethnographic evidence and oral histories it is possible to learn something of hunting techniques in the later Iron Age.

Hunting was clearly important in some Iron Age economies of southern Africa. Maggs (1975) has drawn attention to the consistent presence of *Alcelaphine* antelope in the faunal collections from sites on the southern Highveld, while a general review of evidence from other areas suggests that Iron Age communities were far from dependent solely on their domestic stock and crops (Hall, *in press*). But although much can be inferred from the faunal evidence, there has been little direct archaeological investigation of the technology involved in the hunt. Recently, however, officials of the Natal Parks Board discovered a number of shallow depressions in the Umfolozi Game Reserve, Zululand (Fig. 1). In the early nineteenth century, this area was known to have been favoured for hunting by the Zulu King, Shaka, and local opinion was that the features which the wardens had discovered were the remnants of pitfall traps used by the Zulu at this time. The Parks Board kindly agreed to permit excavation in the Reserve, and with the co-operation of their staff it was possible to investigate this site in some detail.

Apart from the potential of discovering something of hunting, there was a further incentive to excavate at this locality, and this was the possibility of integrating oral histories, archaeological data and ethnographic information; thus finding out more about this aspect of the Iron Age than has been possible by more conventional means. Oral histories have been used rarely in conjunction with archaeological data while ethnographic sources tend to be used merely as analogy rather than to their full advantage. In this case it was felt that there was much to be gained through actively pursuing all these lines of enquiry together, a possibility which arose only because of Mr J. B. Wright's willingness to collect and translate material from African informants.

When the site was first visited, it was obvious from their alignment and their regularity that the features were man-made. The majority of the oral information was collected at this initial stage (see appendix), confirming that the depressions were indeed the remnants of nineteenth-century game pits.

The traps were dug on an isthmus of high land between the Black and the White Mfolozi rivers at the point where their courses form a bottleneck. This may be seen clearly in the aerial photograph (Fig. 2), which shows the two rivers just above their confluence. At the neck a small tributary of the Black Mfolozi has been blocked

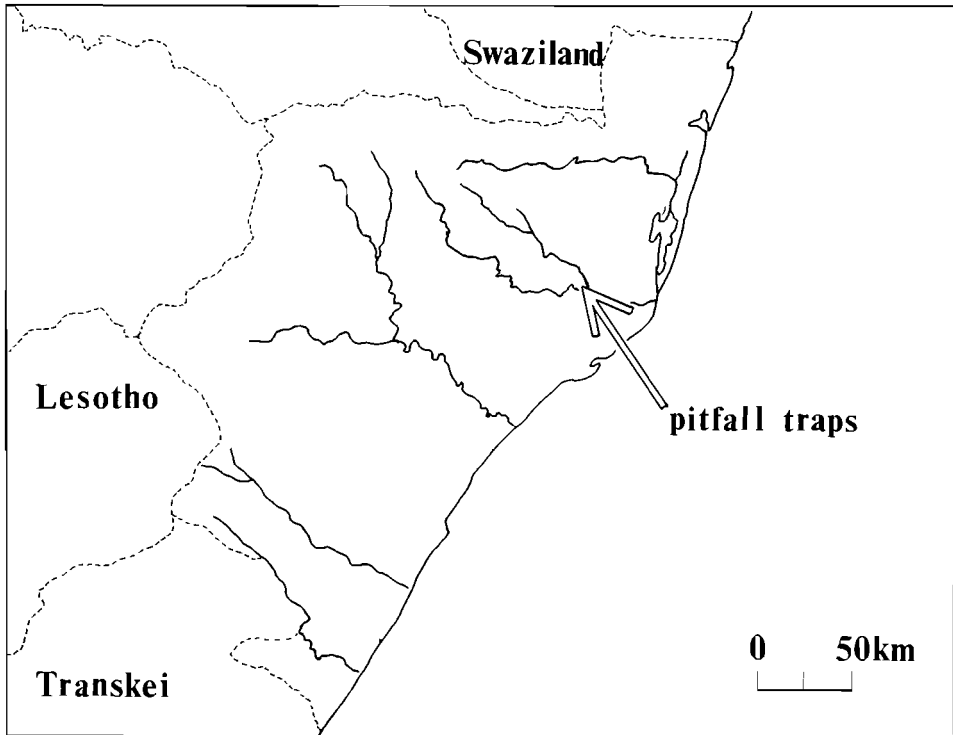


Fig. 1. Map of Natal and Zululand, showing the location of the Umfolozi pitfalls traps.

at its mouth, apparently by sediments from the larger river, with the result that an area of standing water and swamp has been formed. This appears as a light-grey meander in Figure 2. Consequently, the passage between the two rivers had been restricted considerably at this point, forming a natural 'funnel' into which animals could be driven. Such a combination of natural features is rare, and it is clear that the traps had been dug to take maximum advantage of the structure of the landscape.

The pits formed two lines, A and B (Fig. 3). One (line A) consisted of four irregular holes dug under a small shale escarpment some 2 metres high and lying parallel to the two rivers. The first of these was cleaned and a quadrant excavated, but although the feature had been clearly made by man, the broken shale fill obscured any detail in the sections. There was considerable variation in both the size and the shape of the pits in this group. In contrast, the second line (line B) consisted of six definitely identified traps spaced across the higher part of the saddle between the two rivers (Fig. 4). Towards the White Mfolozi the land surface becomes more broken, and it would seem probable that this obscures further pits which continue the line towards the river. Furthermore, the south end of line B extends into an area of loose sand, presumably deposited by the White Mfolozi in flood, and pits here would not be preserved as well as those higher on the saddle. The angle of slope is steep here and shallow storm-water gullies run down to the river. A number of these are in the line formed by the pits, and it would seem likely that Iron Age excavations have initiated



Fig. 2. Aerial photograph of the confluence of the Black and White Mfolozi rivers. (By kind permission of Professor Scogings, University of Natal, Durban.) Arrow shows approximate locality of pits.

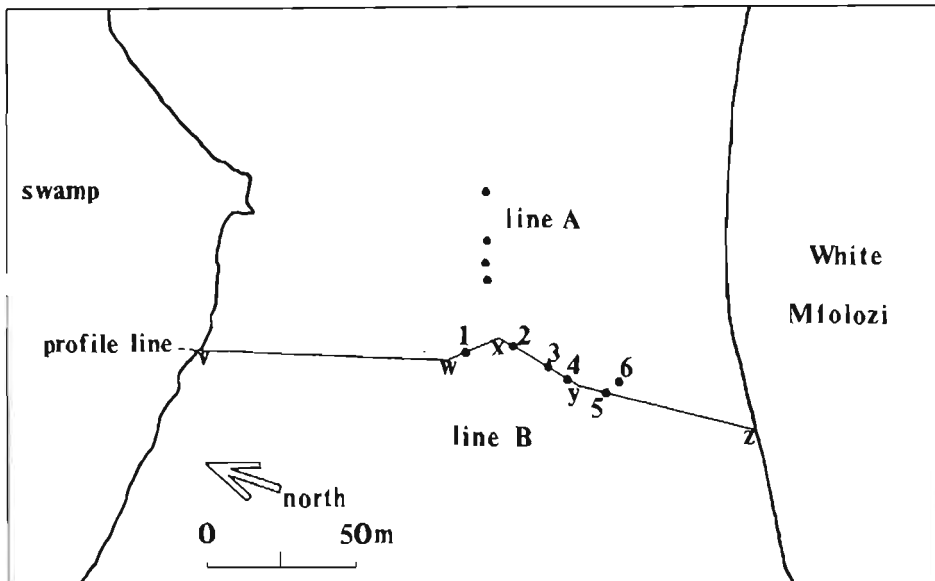


Fig. 3. Location of the two lines of traps, showing the position of the profile (see Fig. 4).

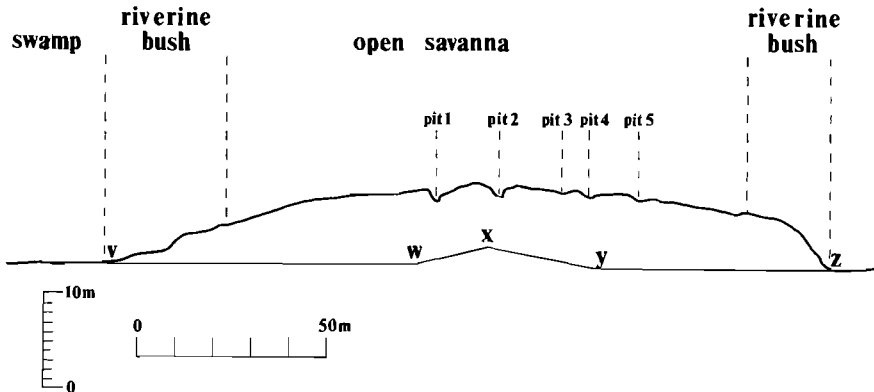


Fig. 4. Profile across the isthmus of high land between the two rivers.

drainage lines, with the result that any pitfall traps in this part of the sites have now been obscured.

An initial impression of the layout of the pits was that line A was a crude construction which was not used at the same time as the sophisticated and regular line B. However, although this may have been the case, other interpretations are possible. The stylistic differences can be seen as having been caused by geological factors, as it probably would have been difficult to conform to a set plan in the rough shale under the escarpment. Moreover, although the two lines are almost at right angles to one another, it is still possible that they were used together, and that the change of direction had been designed to take advantage of the escarpment. Thus line A and line B could have been used separately, with the former taking advantage of the shale escarpment and the latter of the 'funnel' of the converging rivers, or they may have been used together as an irregular barrier. A further possibility is that they were used several times and in both ways.

Three pits in line B were excavated, and their dimensions confirmed the original impression of conformity. All were elliptical in shape, with long axes varying between 3,8 and 4,0 metres and maximum width varying between 2,6 and 3,1 metres (Fig. 5). Maximum depth varied between 1,05 and 1,40 metres below the modern land surface. Although not measured, the visible plans of the unexcavated pits strongly suggested that they were consistent with the three described examples. As may be seen from the section drawings (Figs 6, 7), these pits had flat bases and steep sides, which presumably prevented trapped animals from escaping. Each of the excavated pits had an adjacent spoil tip, and two of these features were sectioned.

There were three layers in Pit 1 (Fig. 6). At the bottom was a red-brown soil with calcrete nodules and some charcoal, a deposit which was essentially the same as the soil in the adjacent tip. Above this lay a black, humic layer with a far higher charcoal content, while the uppermost layer was a lighter-coloured version of the deposit below. The red basal layer was similar to the natural soil in this part of the site, and it would seem clear that it was formed by spoil falling into the pit after it had been dug. In contrast, the overlying deposits are likely to have acquired their distinctive characteristics from vegetation, either decomposing or burning in the pit. There were occasional Middle Stone Age and Late Stone Age artefacts in all the layers,

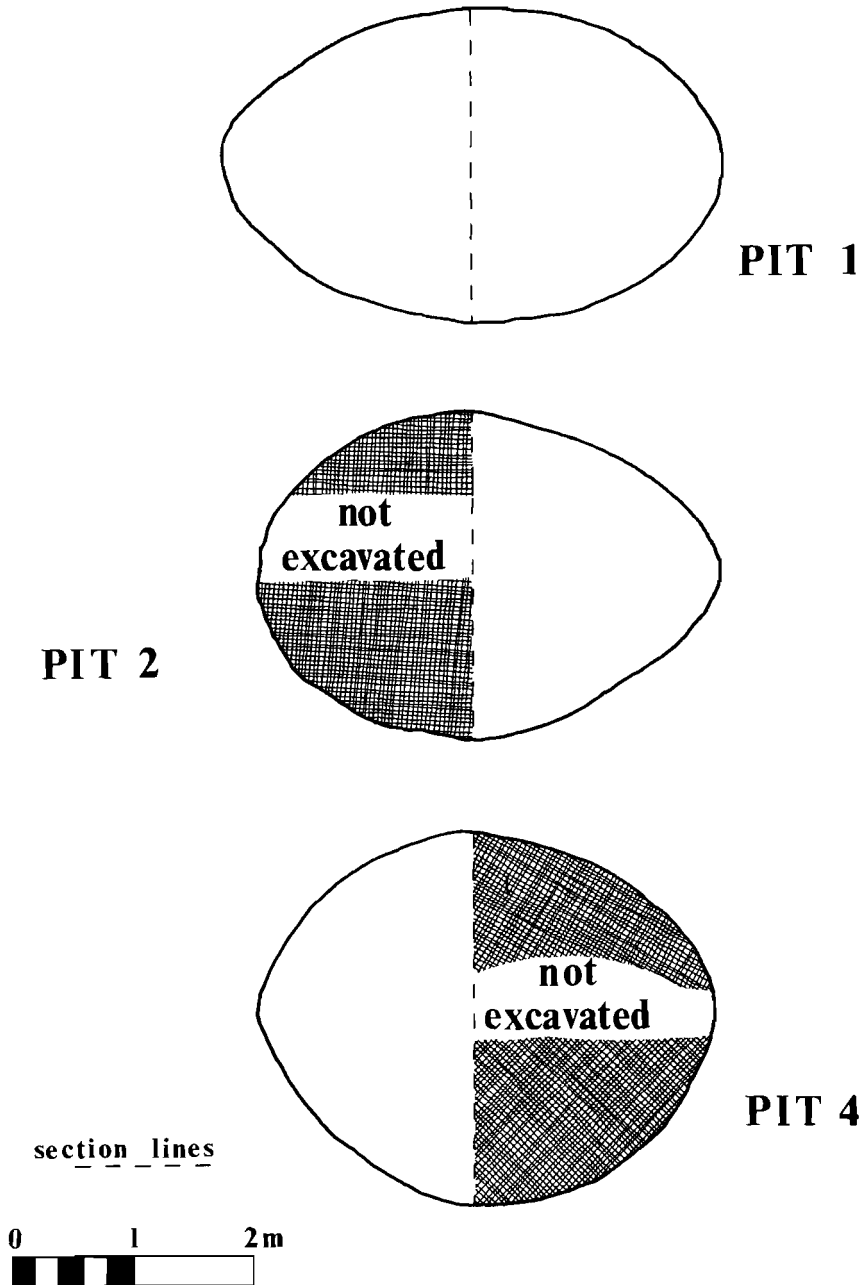


Fig. 5. Plans of the three excavated pits in line B.

which must have been derived from adjacent surface scatters.

The section through Pit 1 showed that this trap was not used on a single occasion, but was cleaned and reused several times. Initially it would seem to have been comparatively shallow and flat-based. Later it was redug in a slightly deeper and narrower form, a process which involved partial removal of the red soil which had accumulated in the original construction. The asymmetrical shape apparent from the transect through Pit 2 suggests that there was a similar pattern of cleaning and reuse (Fig. 6).

Pit 4 was more complicated. Although it had been dug in a dark soil, the majority of the fill was the yellow sand which covers the land surface from this point down to the White Mfolozi. It could be that this sand had been deposited by the river in flood, and so to the earlier discussion of this southern end of line B must be added the possibility that other pits close to the river are now buried. Pit 4 had not been completely filled, however, and the principal deposit in the upper part of the section was a light brown sandy soil (Fig. 7). In this there were discontinuous lenses of both river sand and black deposit rich in charcoal, and it would seem likely that these represent phases of both sheet erosion, when sands from the surrounding land surface were washed into the depression, and veld burning. It is of interest that there was also a sand lens in Pit 2 (Fig. 6), although it would seem that this had been deposited by an exceptionally high flood rather than as a result of erosion, as Pit 2 is above the area of the site which is covered by sands. Thus, from the depositional history of these pits something can be seen of the changing environment of the confluence area, with fluctuating river levels, erosion patterns and vegetation structure.

Timbers of *Spirostachys africana*, recovered from Pit 1, enabled some estimation of the way in which the hunters used the line of traps. Seven branches, up to 102 cm in length and 9 cm in diameter, were found. They were well preserved, and at the depth shown in the section (Fig. 6). When viewed in plan (Fig. 8), it is apparent that they were arranged in a rough latticework which had been pushed down and broken in the centre. This evidence strongly suggests that the pits were camouflaged by a mat of vegetation which was supported by a substantial timber foundation. Fragments of wood, up to 15 cm in length, were also found in both the other pits, although there was insufficient to indicate the pattern of arrangement. Possibly these timbers had been burnt, or were of a softer wood.

It is important to realize that at the time when these constructions were used the local surroundings would have been somewhat different from that of today. The present vegetation is riverine and closed woodland, dominated by such species as *Acacia nilotica*, *Acacia grandicornuta*, *Acacia robusta* and *Phoenix reclinata* (Downing 1972). However, before recent overgrazing and the relaxation of fire control, the environment would have been considerably more open, with grasslands more extensive and the stands of woody elements more restricted. The exception would have been those areas immediately adjacent to permanent water, which would have had substantial tree cover incorporating the *Spirostachys africana* employed to camouflage the pitfall traps (Phillips 1972: 153; Forrest, pers. comm.; Nzima, pers. comm.). Thus these Iron Age hunters must be seen as operating in an essentially open savanna using a line of traps which stretched across grasslands with occasional thickets of scrub, and between the stands of dense vegetation immediately adjacent to the White Mfolozi and the area of swamp to the north of the pits.

The archaeological evidence is supplemented both by general descriptions of Nguni hunting practices, and by oral histories, of which there are two types. Firstly there are the traditions collected by authors such as Bryant (1929) and Ritter (1955), who wove their evidence into general versions of Zulu history. Although this constitutes important source material it is often difficult to evaluate fully since these writers were concerned with the general flow of events, rather than with detailed assessments. Secondly there are those oral histories recorded in the course of the archaeological field work. However, there is the disadvantage that it is now more than 150 years since Shaka's time. Consequently, informants with detailed knowledge are difficult to find, and their evidence is less substantial than that recovered by Bryant and Ritter. Furthermore, it is difficult to assess the originality of some information. The story of the game pits has now been known for some years, and there has probably been a degree of 'feedback' from the popularized written accounts, for instance in the face of demands for information from tourists. Finally, it should be noted that it was not possible to conduct a systematic search for information, and informants were chosen more by their availability than by their qualifications. In consequence, oral traditions in this class should be regarded as secondary to the earlier accounts. However, when all the information is assessed, a reasonably complete picture

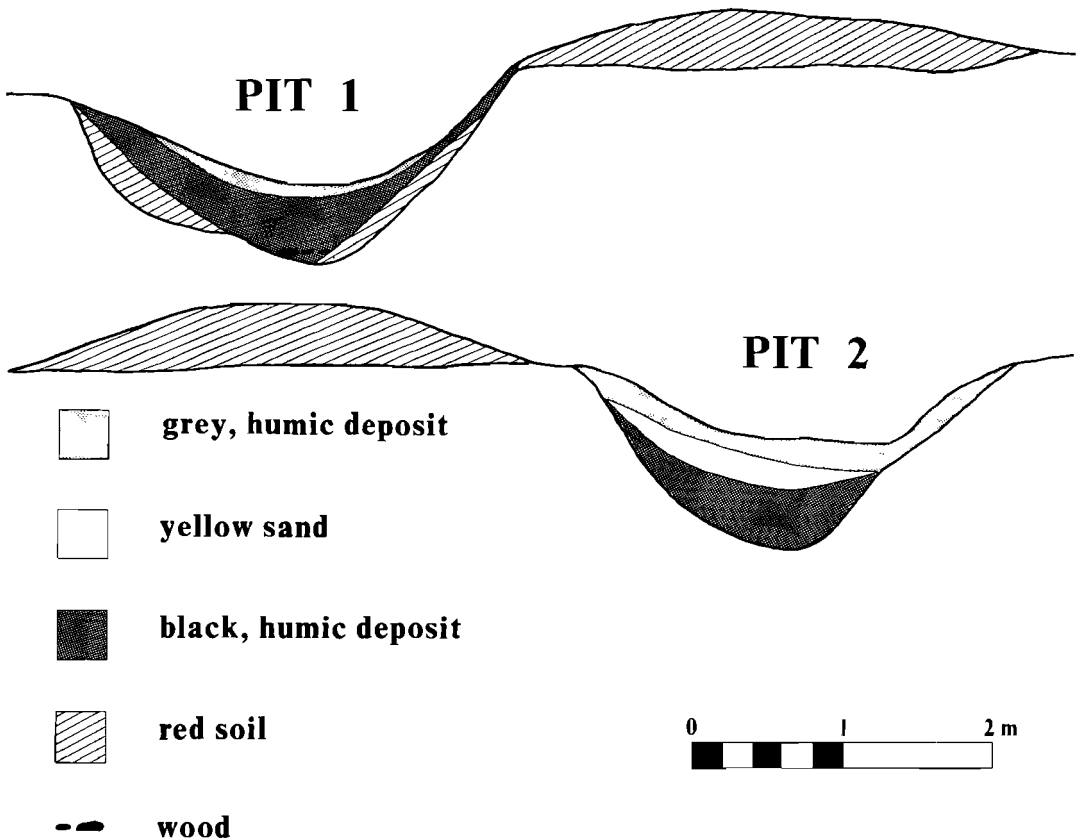


Fig. 6. Sections through Pits 1 and 2 and adjacent spoil tips.

emerges. In the present study, we were most grateful for the help of Sikhakhane, Mthembu and Nzima. Their evidence is set out fully in the appendix.

Bryant comments on the general advantages of the area in which the pitfall traps were built. 'His most recent acquisition of the Ndwandwe domain was particularly gratifying; for it contained, notably between the two Mfolozis, some excellent hunting ground. After killing men, felt Shaka, the most exhilarating sport is killing beasts; and when not occupied with the major pastime, he would often wend his way over the Mfolozi for a little wholesome bloodshed in the contiguous woodlands, then teeming with buffalo, elephant, rhinoceros, kudu, zebra, lion, waterbuck and a dozen other species of mighty game' (Bryant 1929: 217). Thus it is clear that the confluence area was important for its wild resources. There is, however, some disagreement with regard to specifically when the pitfall traps were used. Ritter (1955: 205) concludes that they were dug by Shaka for use in a hunt which was part of the celebrations for the defeat of the Ndwandwe chief Zwide. If this is the case, then they most likely date from between 1819 and 1820 (Bryant 1929: 204). However, Sikhakhane and Mthembu, while confirming that the traps were dug by Shaka, stated that they were used while he was resident at Dukuza. Since this settlement was not constructed until November 1826 (Bryant 1929: 595), and was occupied until Shaka's death in September 1828, this evidence suggests a later date for the utilization of the traps. However, when the archaeological data, outlined previously, are taken into account, the most reasonable conclusion would seem to be that the game pits were used on several occasions, an interpretation which was shared by Nzima.

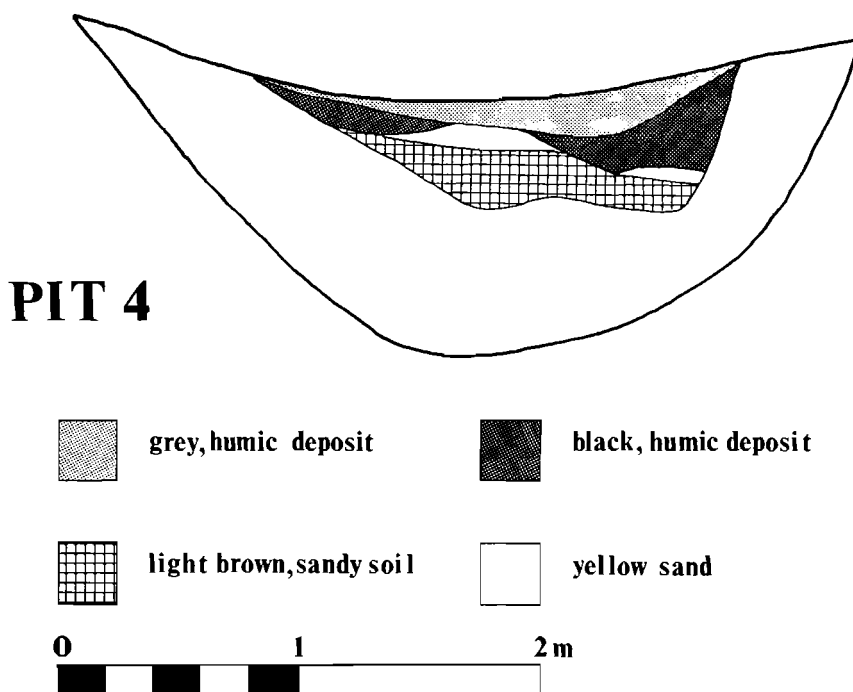


Fig. 7. Section through Pit 4.

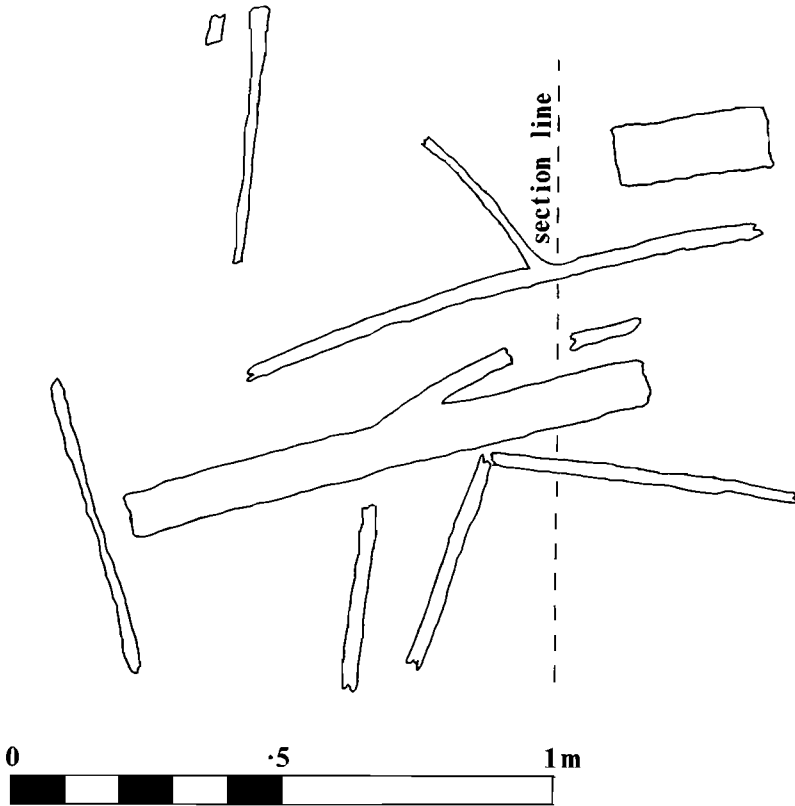


Fig. 8. Plan of the *Spirostachys africana* latticework lying at the base of Pit 1.

All informants agreed that the game was driven by the Zulu regiments from a considerable distance to the north-west. They also agreed that the pits were camouflaged with a platform of bush; this observation is directly confirmed by the archaeological evidence. However, while Sikhakhane and Mthembu maintained that there were no fences between the traps, Nzima suggested that the gaps were blocked by a combination of natural thickets and barriers of cut bush and thorns. Unfortunately, there is no archaeological data available to help in the assessment of these contrary opinions. However, the bulk of ethnographic evidence describing Nguni hunting practices suggests that it was normal for a line of pitfall traps to be accompanied by fairly elaborate fencing, which served to direct the game towards the pits (e.g. Shooter 1857: 42). Therefore, on balance, it would seem that Nzima's interpretation of this particular point is the most reasonable.

Unfortunately, excavation produced no identifiable faunal remains, and it would seem likely either that all the meat was removed and butchering conducted elsewhere, or that scavengers disposed of anything left over from each use of the pits. In consequence, it is possible only to infer which species were the principal concern of the hunt.

As the traps in line B were shallow, it would seem unlikely that they were designed with the aim of capturing the majority of the antelope species, since the agility of these animals is such that it is difficult to see how they could have been contained

(Forrest, pers. comm.). One possibility is that individuals were trapped by the weight of subsequent victims, a method mentioned by Theal (1907: 149). However, if this was the case, the pits should still have been deeper, since they would have filled rapidly, and the majority of animals would have subsequently escaped. Therefore, although a variety of species would undoubtedly have been culled, it would seem unlikely that these pits were designed purely for general drives of game.

Such considerations suggest that Shaka was attempting to catch the larger, more cumbersome species which would have been more easily disabled. Of these, the ethnographic literature suggests that the hippopotamus, elephant and buffalo were economically the more important, and most frequently the targets in the specialized hunt. In the first case, the traps in line B would clearly have been inadequate, for apart from the fact that it is normally only terrestrial at night, the hippopotamus could hardly have been restricted by the two rivers. However, individual pits were used in the capture of this animal, a process which was described by Isaacs (1970: 304). 'The hippopotamus the natives generally secure by digging pitfalls in his tracks, with a large stake in the centre. When he emerges from the water to graze on the river banks, they endeavour to drive him into the paths in which the pit is prepared, covered over to elude his vigilance, when he is precipitated into it, and the stake pierces his body, so that he is immediately killed by the natives.' Although the results of the excavation were inconclusive, it would seem possible that the four pits, dug under the shale escarpment, were used for this form of hunting. These were not aligned to take advantage of the natural 'funnel'; rather they were underneath an abrupt rise in the land surface which would have proved of considerable advantage in killing a large and aggressive animal trapped below. Furthermore, these pits are comparatively close to the riverine bush of the Black Mfolozi, which would have formed an important terrestrial niche for this species. Such an interpretation is strengthened by Shooter's (1857: 42) comment that such pitfalls were a speciality of the Mthetwa, since this group would seem to have occupied the confluence area in the later Iron Age (Bryant 1929: 83).

A second species which could have been hunted with the aid of the escarpment pitfalls was the elephant. Isaacs (1970: 304) describes the common method of attack. 'They . . . get the beast into defiles where he is easiest of access, and where they can assail him with less danger from the bushes around him, provided these are not too thick, and in this position they do not fail to make their assegais effectual. The elephant, however, in these situations, will often escape from his pursuers who at times feel the effect of his rage and power.' Here, a prime aim was clearly limitation of the animals' facility to manoeuvre, and in this pitfalls would have been an asset. It would also seem possible that the pits in line B could have been used in elephant hunts, as these traps would have been sufficient to disable the animals while they were speared. Thus although the ethnographic sources are ambiguous about the use of pitfalls for this species, the elephant could have been killed with the aid of traps. It was certainly indigenous to the area and it would seem likely that a number were culled by Shaka's regiments. Ritter's (1955: 208 ff.) version of the hunt insists that a large number of elephants were killed.

Individuals pits are likely to have been less appropriate for the gregarious buffalo, as these animals would have been more susceptible to organized drives. Shooter

(1857: 42) describes the technique. '... for buffalos, a long fence is constructed with openings or passages leading through it, and near to which the pits are placed. These having been covered, people watch for the animals and continue to drive them towards the fence, when they naturally proceed to the openings and pass over the ... holes.' The constructions mentioned in this account are clearly very similar to the line of pits in the Mfolozi valley, and, indeed, Ritter follows the same argument.

There would seem, then, to be several possible ways in which the pits were used. Firstly, line B, either alone, or in conjunction with line A, could have been used to form a general barrier for the game, with the principal aim of killing the larger animals such as buffalo and elephant. Alternatively, the traps in line A could have been used by themselves, presumably for elephant or hippopotamus. Thus by the integrated use of a variety of information it has proved possible to gain a fairly substantial impression of hunting technology in this specific context.

ACKNOWLEDGEMENTS

I should like to thank the Director and staff of the Natal Parks Board, who provided invaluable help on many occasions, and, in particular, Mary Rose at head office and John Forrest, Warden of the Umfolozi Reserve, who made our stay most pleasant. J. B. Wright collected the oral histories which form an important part of this paper, while T. Maggs, P. C. Human, K. Mack and M. O. V. Taylor read and criticized earlier drafts most effectively. H. Allen, J. Daphne, A. Davies, P. C. Human, M. Moberly, T. Maggs, J. Morrison, P. Skoberla, P. Waugh, R. Welbourne and J. Wright formed an excellent excavation team, and Ndlelibomvu Nzima provided reassuring protection.

APPENDIX

I

Informants: Game guards Sikhakhane and Mthembu

Venue: Umfolozi Game Reserve

Date of interview: 29 October 1975

Also present: nil

The interview took place during an inspection of the game pits near the confluence of the Black and White Mfolozi rivers by Martin Hall and Tim Maggs, archaeologists at the Natal Museum, Pietermaritzburg. The two guards were allocated to us by the Natal Parks Board officer-in-charge of the Reserve, John Forrest. As far as I know, neither was selected for any special knowledge he might have of the game pits.

Mthembu, aged c. 60, had more than twenty years' service with the Natal Parks Board. Sikhakhane, aged c. 40 or less, had eight years' service. In answer to my questions it was the latter who did most of the talking. He was intelligent, and articulate to the point of making me suspicious as to how much of his information was traditional, and how much was derived from outside sources.

The game pits had been dug in Shaka's time. Every winter, provided there was no military campaign under way, he would order a hunt to be held. Regiments (*amabutho*) would be summoned and would drive the game from miles around, sometimes from a distance of five hours' walk. If necessary they would sleep on the way overnight.

Shaka lived at Dukuza at this time. He would come and stay in temporary shelters on the south side of the White Mfolozi. During a game drive he would take up a position by the wild fig tree at present growing near the biggest of the pits, and signal with his white shield to the beaters to advance, now on this side, now on that.

The pits were very deep; animals falling in would be crushed by others. The pits would be covered over with branches and grass to conceal them. There were no fences between them; the lines of beaters on either side acted as 'fences', driving backwards and forwards the animals that managed to escape the pits. Game falling into the pits would be speared to death.

Anyone hunting unofficially would be killed. For the same offence nowadays the Whites lock people up.

The two informants had obtained their knowledge from the older people.

J. B. Wright, University of Natal, Pietermaritzburg, 27 May 1976

II

Informant: Ndlelibomvu (Joseph) Nzima
 Venue: Umfolozi Game Reserve
 Date of interview: 29 May 1976
 Also present: John Wright

The interview took place during the course of the excavation of the game pits by a team from the Natal Museum, Pietermaritzburg. Nzima was a game guard allocated to the team by the Warden of the reserve.

Nzima, aged about 32, had worked in the Umfolozi Reserve since 1962. He lived five hours' walk from the Reserve in the direction of Ngoma, and near the Mngeni River.

In his opinion, the spaces between the game pits would have been fenced with bush, and the pits themselves would have been disguised with branches. The animals were driven from upstream, and the huntsmen would have hidden down by the river, and speared animals as they fell into the pits. The pits were used by Shaka—probably on more than one occasion.

Nzima noted that the vegetation regime in the Reserve was sensitive, and the flora of the area around the game pits had changed within the fourteen years that he had worked for the Natal Parks Board. The general tendency had been towards an increase in bush cover. In the early 1960s he maintained that reed beds had extended from the White Mfolozi up to pit D.

Martin Hall, Natal Museum, Pietermaritzburg. 25 June 1976

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